

Abstract of the Disclosure

A magnetic random access memory (MRAM) includes a first memory array having a plurality of first memory cells, wherein each one of the plurality of first memory cells is arranged at an intersection of at least one of a plurality of wordlines, at least one of a plurality of bitlines, and at least one of a plurality of digit lines, a second memory array having a plurality of second memory cells, wherein each one of the plurality of second memory cells is arranged at an intersection of at least one of the plurality of wordlines, at least one of a first bitline and a second bitline, and at least one of the plurality of digit lines, a current providing unit for providing a second current to one of the first bitline and the second bitline in response to a reference voltage, and a sense amplifier for comparing a first current flowing through one of the plurality of bitlines with the second current. A constant current flows to a reference data line without adjusting a level of the reference voltage.

Therefore, it is possible to efficiently and accurately sense current of a bitline and determine a logic state of a selected memory cell.